



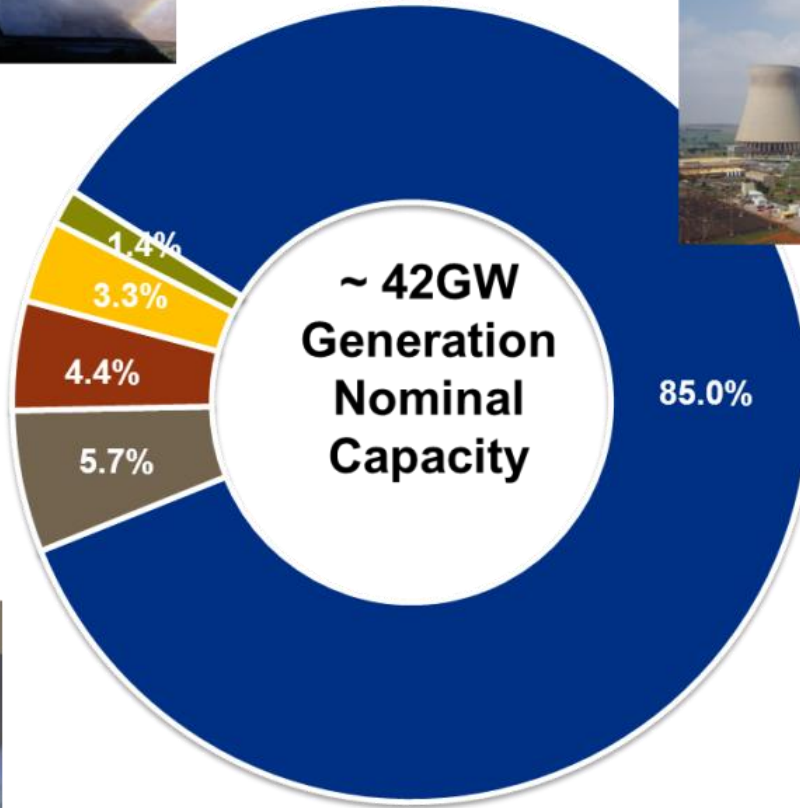
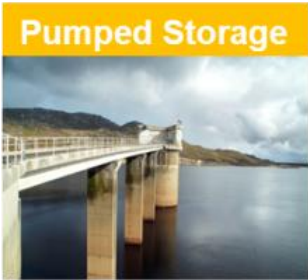
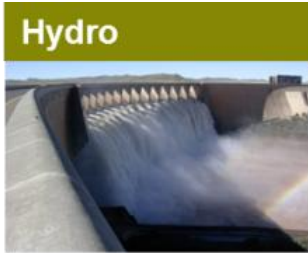
South Africa Electricity Supply Industry An Overview

April 2016



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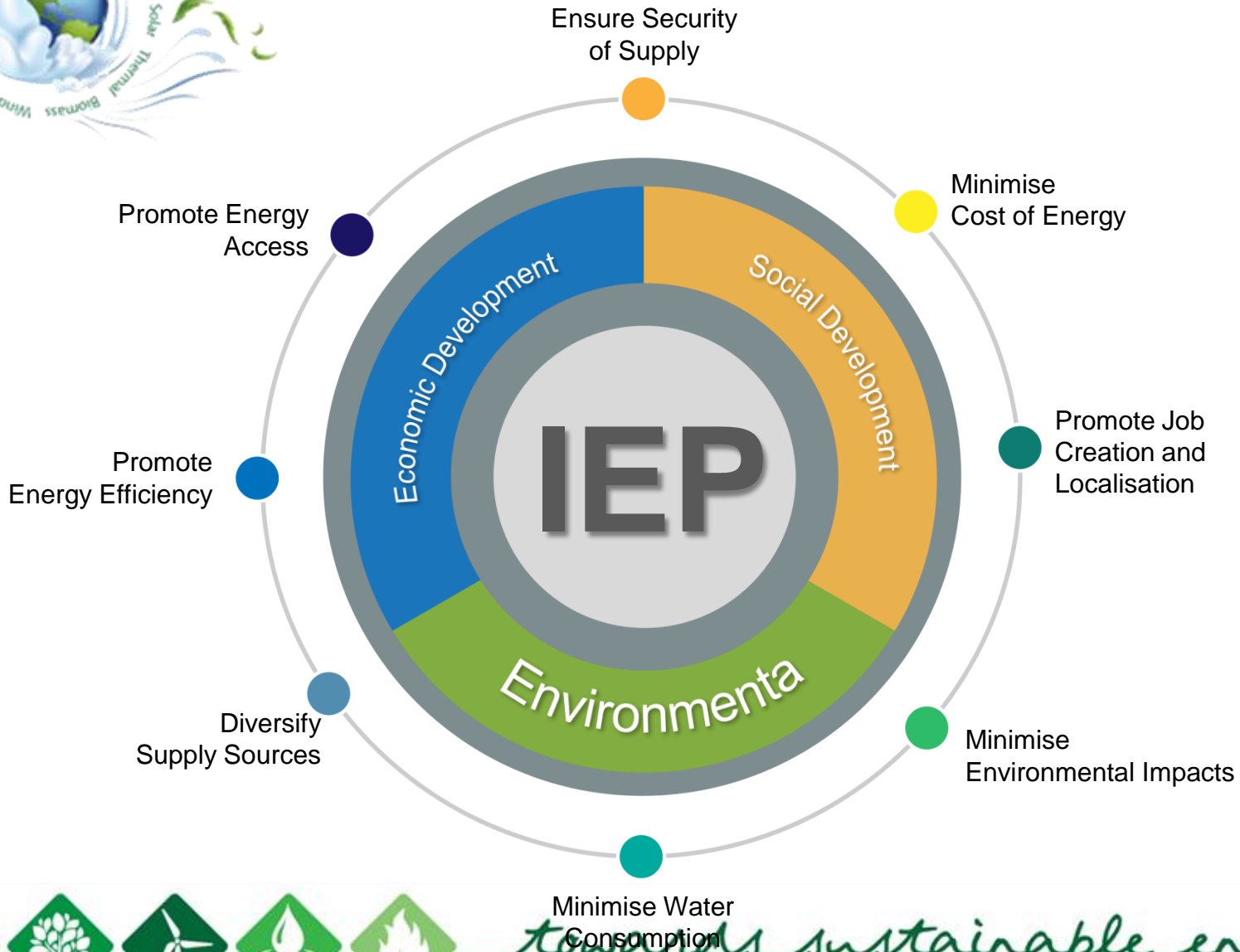
Current Power Generation plant mix



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Planning objectives



Minimise Water Consumption

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INTEGRATED ENERGY PLAN



Informal settlements - energy access challenge



Image © 2010, GeoEye

© 2010 Tele Atlas

25°43'32.63" S 28°24'29.50" E elev 1350 m

Google

Eye alt 2.84 km

Imagery Date: Sep 13, 2009

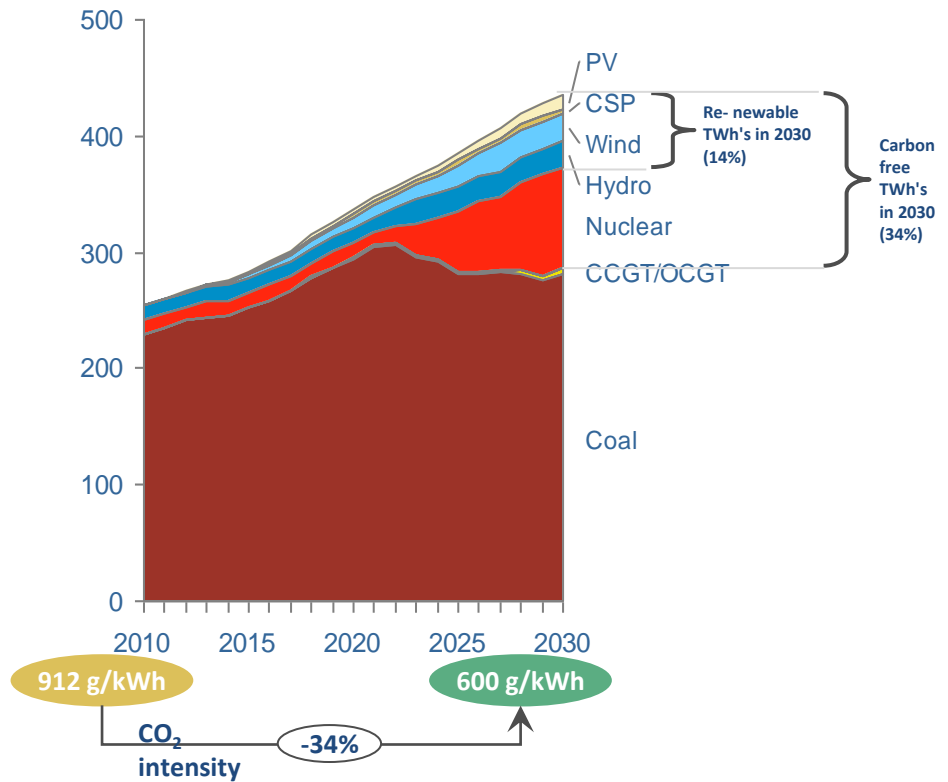
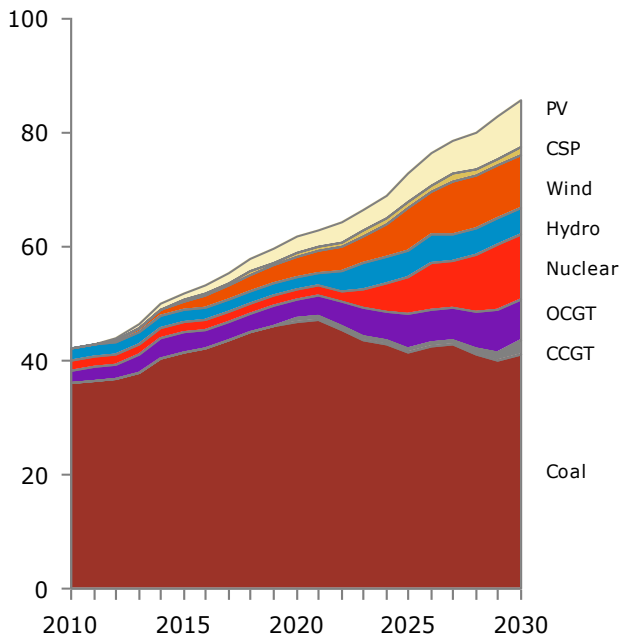


Changing the Energy Mix and Reducing Carbon

Coal and nuclear are still the backbone of the energy supply

Capacity installed in GW¹

Electric energy supplied in TWh p.a.



Source: IRP 2010

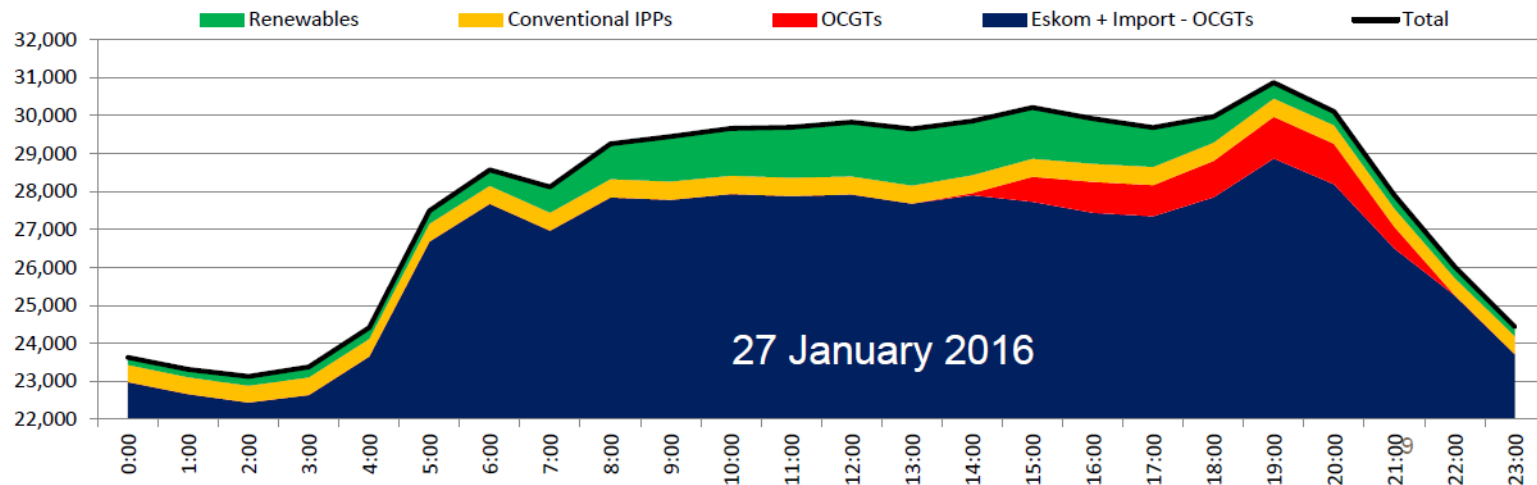
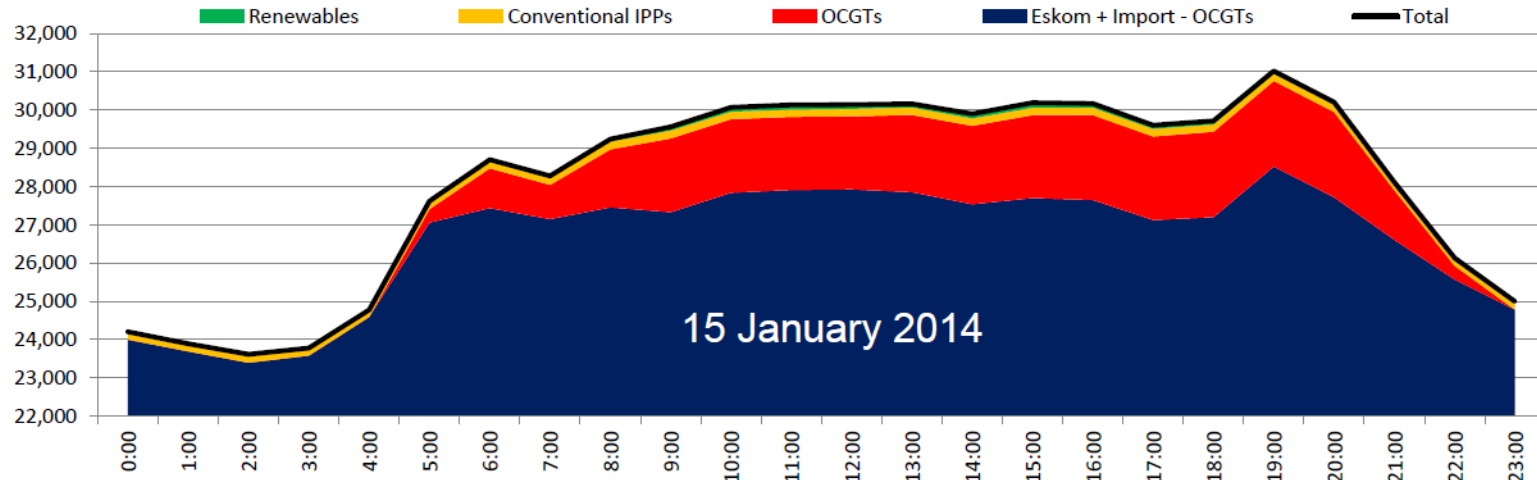
1. Pumped storage capacity of 1,4 GW in 2010 and 2,7 GW in 2030 is not included since it is a net energy user



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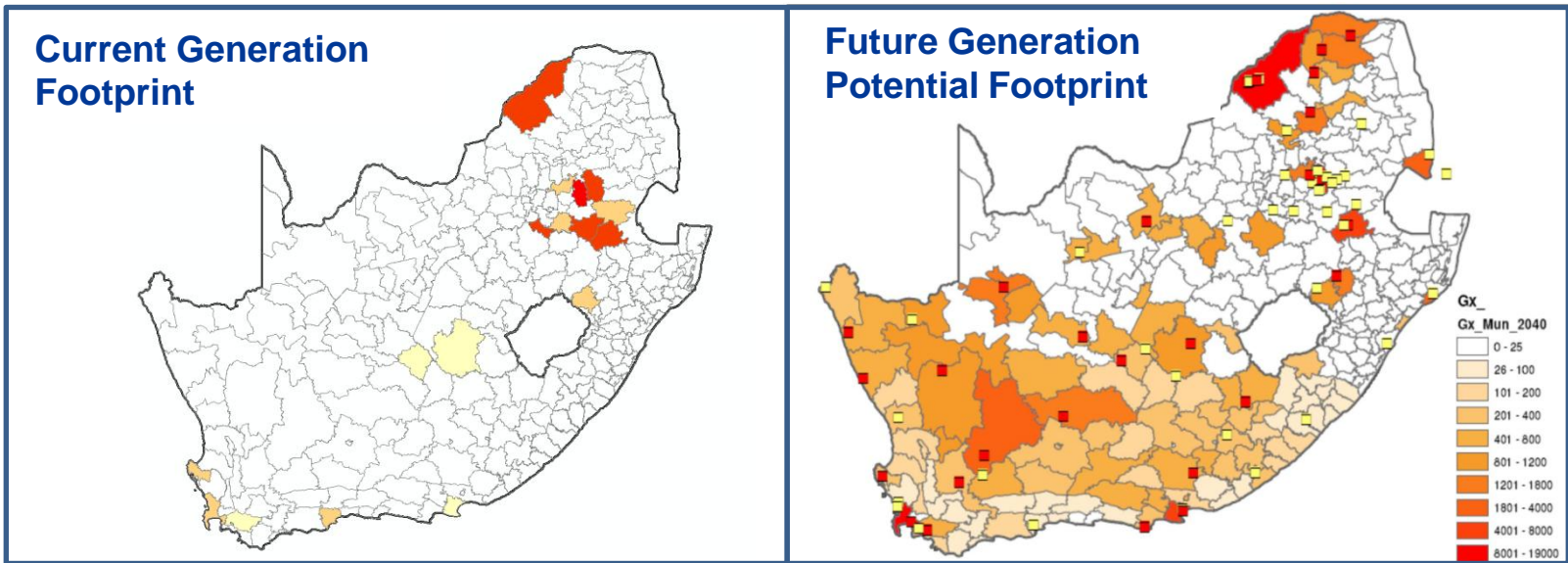
Changing Generation Dispatch, including Renewables



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Changing the Generation Spatial Footprint



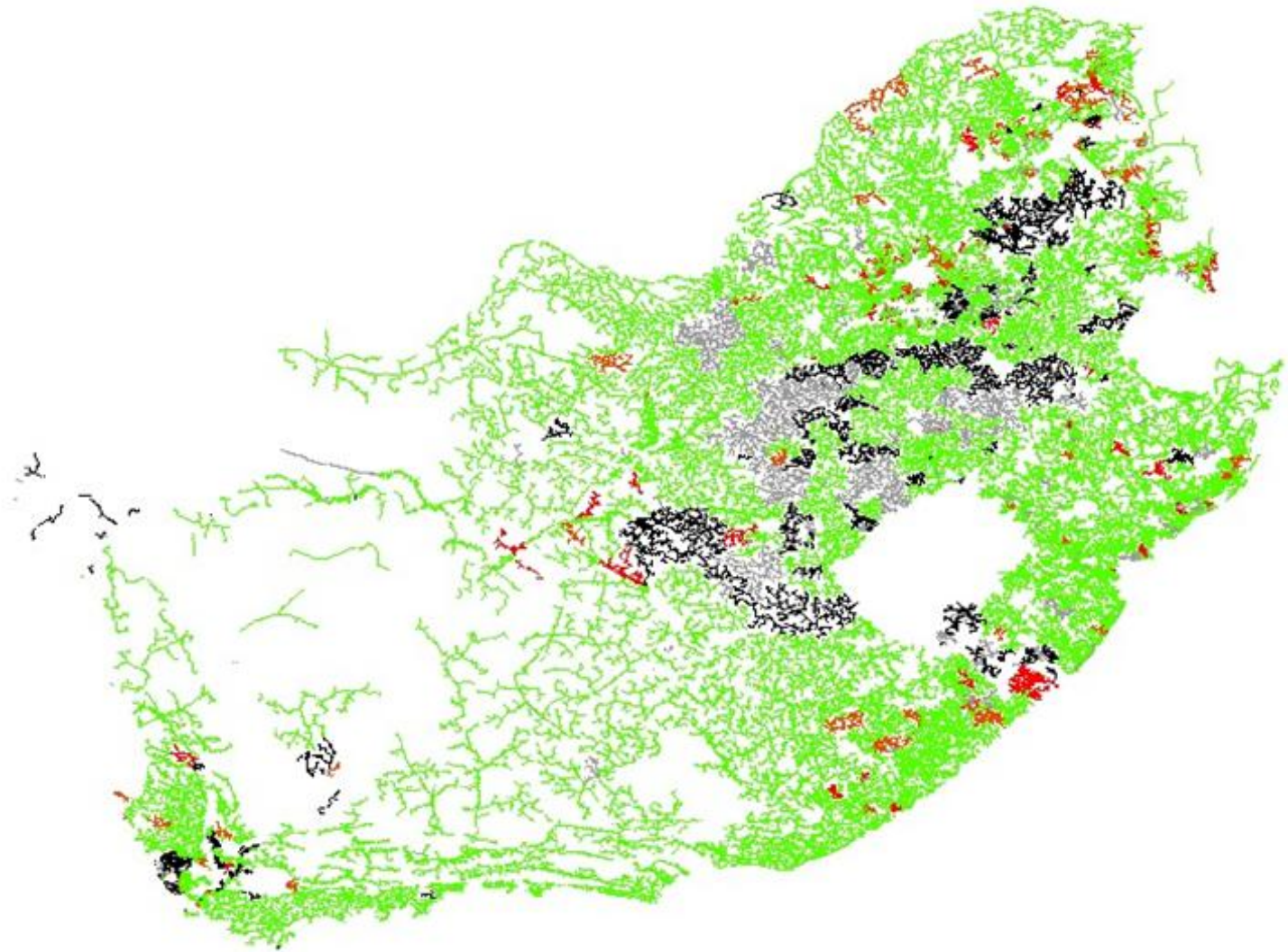
Irrespective of generation scenario



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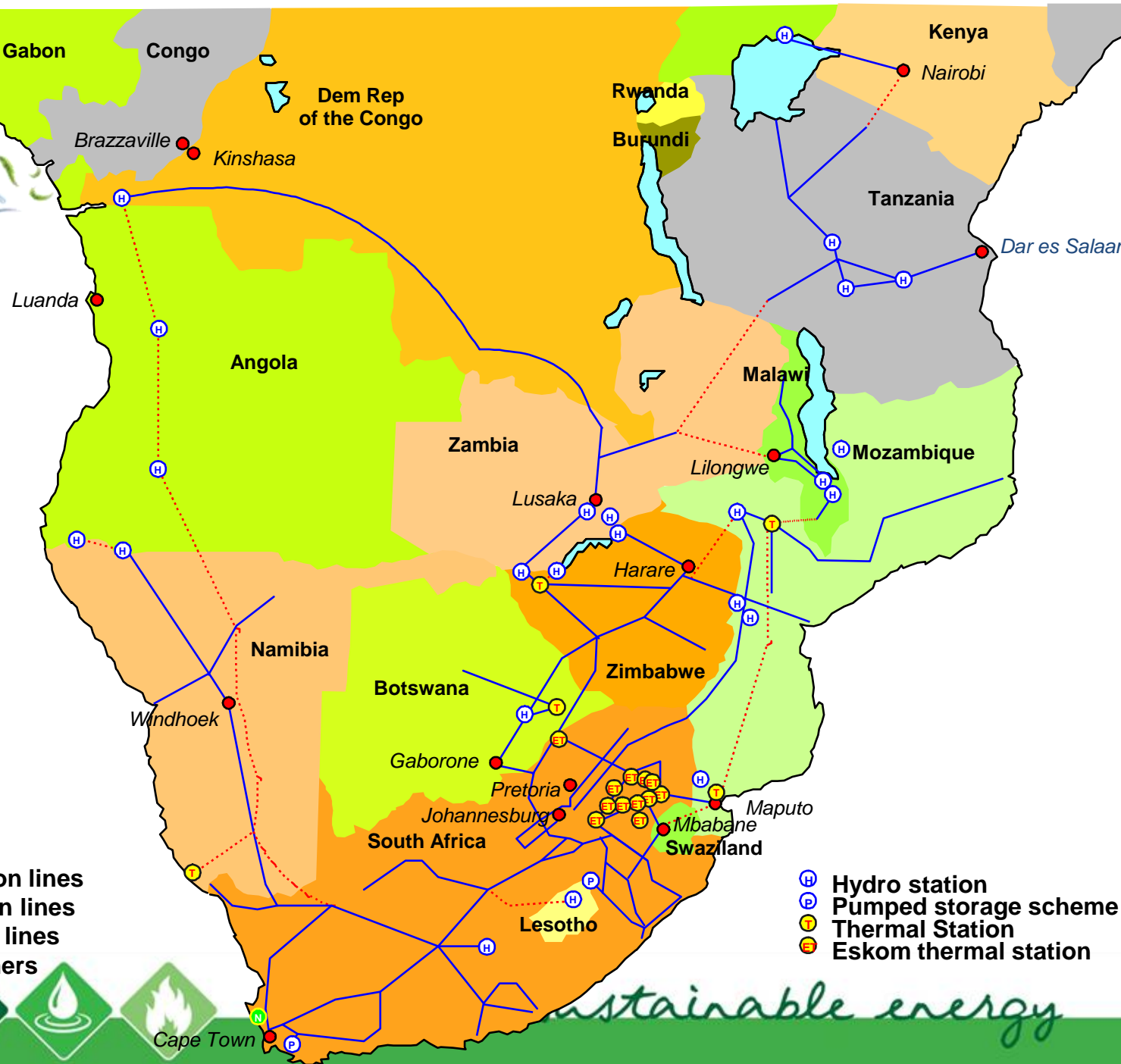
Extensive Grid Network Coverage



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Southern Africa Grid



ESKOM
 26 443 km transmission lines
 40 399 km distribution lines
 214 168 reticulation lines
 244 568 transformers

- Hydro station
- Pumped storage scheme
- Thermal Station
- Eskom thermal station



May 13, 2016

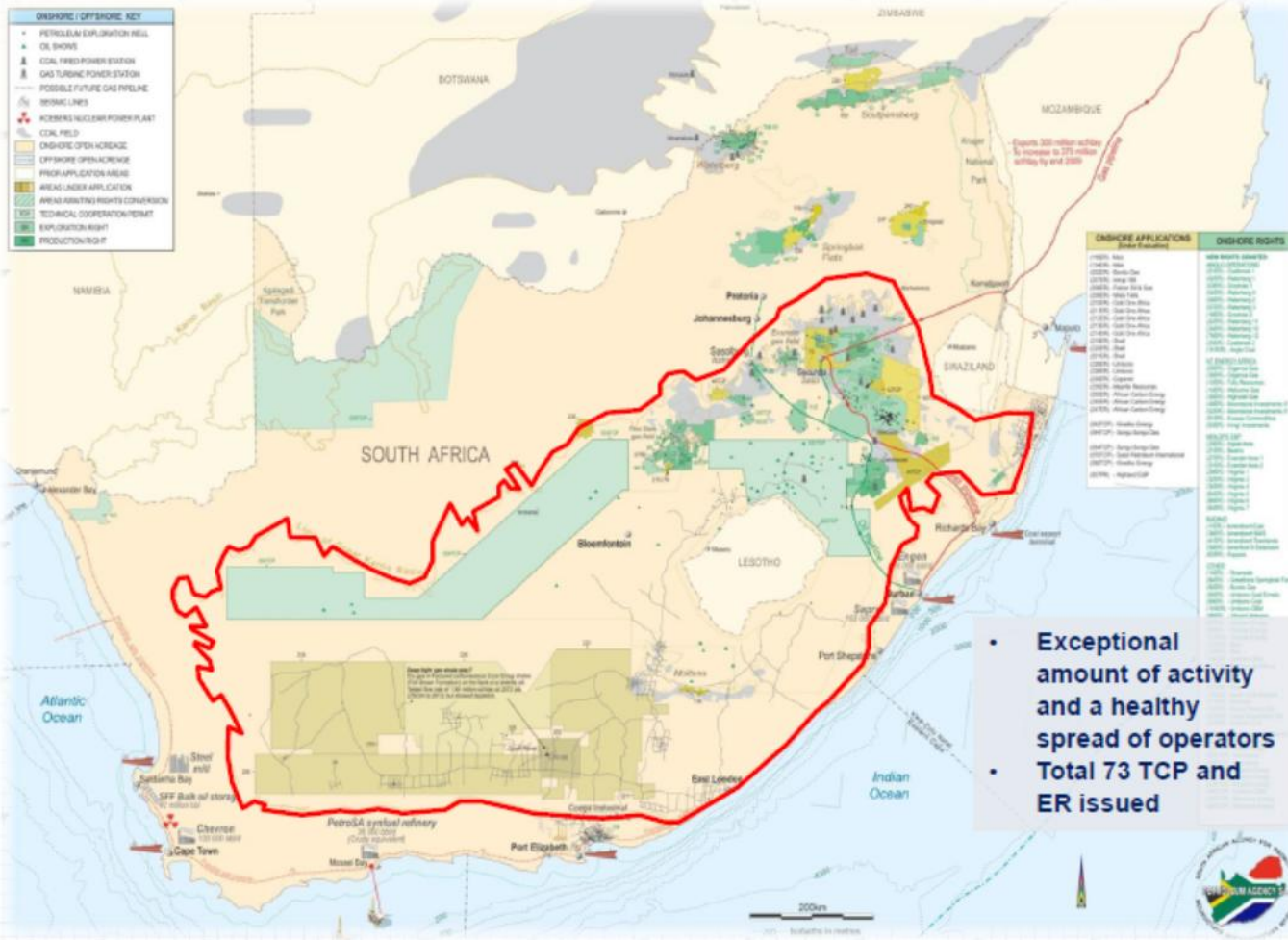
Cape Town

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Gas Infrastructure Aspiration

LNG, pipeline infrastructure and ultimately Shale Gas development

Snapshot of onshore exploration developments in South Africa

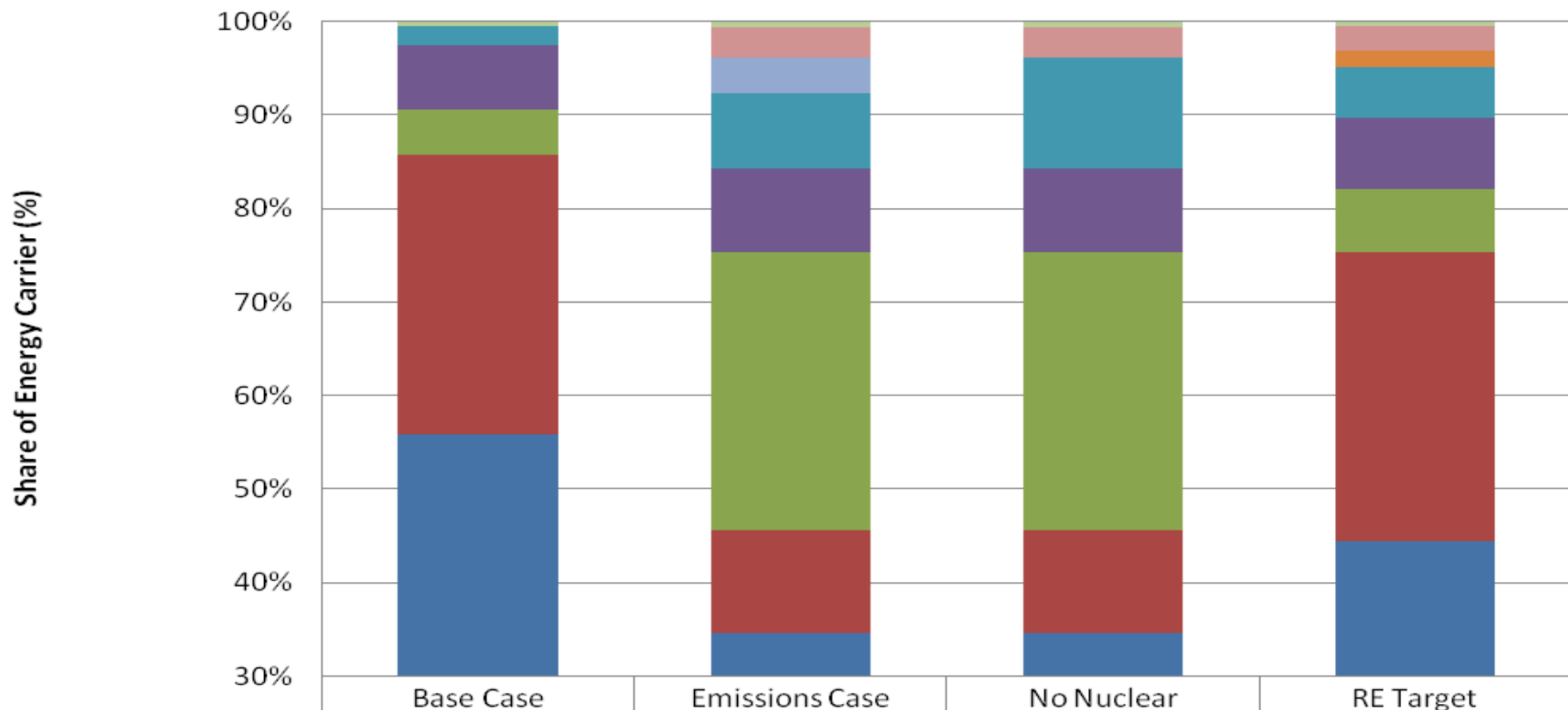


- Exceptional amount of activity and a healthy spread of operators
- Total 73 TCP and ER issued



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Primary Energy Use (2050)



	Base Case	Emissions Case	No Nuclear	RE Target
Hydro	0%	1%	1%	1%
Wind	0%	3%	3%	3%
Nuclear	0%	4%	0%	0%
Biomass	0%	0%	0%	2%
Solar	2%	8%	12%	5%
Gas	7%	9%	9%	8%
Petroleum product	5%	30%	30%	7%
Crude	30%	11%	11%	31%
Coal	56%	35%	35%	44%



Thanks

April 2016

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